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Certificate No.: TC-5548

QC ABSTRACT

NAME OF WORK: Construction of Ward Office in Ward No.05, Byatarayanapura

NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
		Materials				
1	Cement	Fineness by dry sieving	One Test		1	1
		Finess by Air permeablity method	One Test		1	1
		Density	One Test		1	1
		Standard Consistency	One Test		1	1
		Initial Setting time	One Test		1	1
		Final Setting time	One Test		1	1
		Soundness (Le Chatelier's Method)	One Test		1	1
		Compressive Strength	One Test		1	1
2	Coarse aggregate(40 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
3	Coarse aggregate(20 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
		Aggregate crushing Value	One Test		1	1
		Aggregate Impact Value	One Test		1	1
4	Fine aggregate	SIEVE ANALYSIS	One Test		1	1
		Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
5	Steel	Bend test	One Test		1	1
		Tensile Test	One Test		1	1
		Yield Test	One Test		1	1
		ReBend test	One Test		1	1
6	Block(400*200*200)	BLOCK DENSITY	One Test		1	1
		WATER ABSORPTION	One Test		1	1
		DIMENSION ANALYSIS	One Test		1	1
		COMPRESSIVE STRENGTH	One Test		1	1
7	Block(400*100*200)	BLOCK DENSITY	One Test		1	1
		WATER ABSORPTION	One Test		1	1
		DIMENSION ANALYSIS	One Test		1	1
		COMPRESSIVE STRENGTH	One Test		1	1

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8	Brick	Compressive Strength	One Test		1	1
		WATER ABSORPTION	One Test		1	1
		EFFLORESCENCE	One Test		1	1
		DIMENSIONS AND TOLERANCES	One Test		1	1
9	PCC(M15)	Compressive Strength(7days and 28days)	1 set		2	2
10	RCC(M20)	Compressive Strength(7days and 28days)	2 set /6-15 cum	14.04	4	4
11	RCC(M25)	Compressive Strength(7days and 28days)	1 set /1-5 cum	3.81	2	2
12	CERAMIC TILES	MEASUREMENTS OF LENGTH, WIDTH AND THICKNESS	One Test		1	1
		MODULUS OF RUPTURE AND BREAKING STRENGTH	One Test		1	1
13	Mortar Sand	Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
		Compacted Bulk Density	One Test		1	1
		Loose Bulk Density	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1
14	Plaster Sand	Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2021-12-10-06** **Date: 18-02-21**
Project Name	:	Construction of Ward Office in Ward No.05, Byatarayanapura
Agency	:	Sri. S K Keshavamurthy, #104, Sampigehalli, Jakkur Post, Bangalore-560064
Customer's Reference	:	EE(Project)/Ynk Zone/WO/97/2020-21
Date of Receipt	:	15-02-21
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11):1988 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6
Date of test	:	16-02-21
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	1.98	–
2	Finess by Air permeablity method (m^2/kg,Min)	297.3	225m^2/kg, Min
3	Density (gm/cc)	3.11	–
4	Standard Consistency (%)	29.5%	Not specified
5	Initial Setting time	175 minutes	Not less than 30 minutes
6	Final Setting time	285 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1.5mm	Not more than 10 mm

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

) ID	:	CP-2021-12-10-06 **Date: 16-03-21**
ject Name	:	Construction of Ward Office in Ward No.05, Byatarayanapura
ency	:	Sri. S K Keshavamurthy, #104, Sampigehalli, Jakkur Post, Bangalore-560064
stomer's Reference	:	EE(Project)/Ynk Zone/WO/97/2020-21
te of Receipt	:	15-02-21
mple Type	:	Birla Super 53grade
ference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
te of test	:	16-02-21
vironmental Conditions during t	:	Temperature: 26°C Humidity: 72%

Compressive Strength

No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	28.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	39.0N/mm^2	Not less than 37 N/mm^2
3	28 Days	58.5N/mm^2	Not less than 53 N/mm^2

The results obtained are satisfactory as per standard requirements.

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2021-12-10-06** **Date: 18-02-21**
Project Name	:	Construction of Ward Office in Ward No.05, Byatarayanapura
Agency	:	Sri. S K Keshavamurthy, #104, Sampigehalli, Jakkur Post, Bangalore-560064
Customer's Reference	:	EE(Project)/Ynk Zone/WO/97/2020-21
Date of Receipt	:	15-02-21
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	15-02-21

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	214	214	1.4	98.6	90-100
3	20 mm	5049	5263	35.1	64.9	30-70
4	10 mm	7132	12395	82.6	17.4	10-35
5	4.75 mm	2121	14516	96.8	3.2	0-5
6	Pan	484	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2021-12-10-06** **Date: 18-02-21**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	11.9	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	10.1	
3	Specific Gravity	2.59	_
4	Bulk Density(Loose) (Kg/l)	1.39	_
5	Bulk Density(Compacted) (Kg/l)	1.46	_
6	Water Absorption(%)	0.22	_

* The results obtained are satisfactory as per standard requirements.

Executive Engineer

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TEST REPORT ON COARSE AGGREGATES

ab ID	:	**CP-2021-12-10-06** **Date: 18-02-21**
roject Name	:	Construction of Ward Office in Ward No.05, Byatarayanapura
gency	:	Sri. S K Keshavamurthy, #104, Sampigehalli, Jakkur Post, Bangalore-560064
ustomer Reference	:	EE(Project)/Ynk Zone/WO/97/2020-21
ate of Receipt	:	15-02-21
ample Type/ Size	:	20mm down size coarse aggregate
eference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	15-02-21

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	195	195	3.9	96.1	90-100
3	10 mm	2714	2909	58.2	41.8	25-55
4	4.75 mm	1988	4897	97.9	2.1	0-10
5	Pan	103	5000	100	0	–

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TEST REPORT ON COARSE AGGREGATES

Lab ID : CP-2021-12-10-06 Date: 18-02-21

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	12.4	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.8	
3	Specific Gravity	2.57	_
4	Bulk Density(Loose) (Kg/l)	1.41	_
5	Bulk Density(Compacted) (Kg/l)	1.49	_
6	Water Absorption(%)	0.28	_
7	Aggregate crushing Value(%)	23.1	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	21.7	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF FINE AGGREGATE

Date: 18-02-21

ID	:	CP-2021-12-10-06
ject Name	:	Construction of Ward Office in Ward No.05, Byatarayanapura
ncy	:	Sri. S K Keshavamurthy, #104, Sampigehalli, Jakkur Post, Bangalore-560064
tomer's Reference	:	EE(Project)/Ynk Zone/WO/97/2020-21
e of Receipt	:	15-02-21
iple Type	:	Fine Aggregate
erence to BIS codes	:	IS 383 : 2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1, 3) RA2012 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
e of test	:	15-02-21
al weight taken	:	1000 grams

no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	27	27	2.7	97.3	90-100	90-100	90-100	95-100
3	2.36 mm	55	82	8.2	91.8	60-95	75-100	85-100	95-100
4	1.18 mm	239	321	32.1	67.9	30-70	55-90	75-100	90-100
5	600 micron	205	526	52.6	47.4	15-34	35-59	60-79	80-100
6	300 micron	203	729	72.9	27.1	5-20	8-30	12-40	15-50
7	150 micron	191	920	92.0	8.0	0-10	0-10	0-10	0-15
8	Pan	80	1000	100.0	0.0	***	***	***	***

esult :The tested Sample Conforms to Grading Zone II

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TEST REPORT OF FINE AGGREGATE

ID : CP-2021-12-10-06

Date: 18-02-21

'SICAL PROPERTIES

	Tests	Result	Requirements as per IS 383:2016
	Water Absorption(%)	1.5	-
	Specific Gravity	2.59	-
	Material finer than 75 micron(%)	6.9	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

e results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF STEEL

: CP-2021-12-10-06 **Date: 02-04-21**

Name : Construction of Ward Office in Ward No.05, Byatarayanapura

: Sri. S K Keshavamurthy, #104, Sampigehalli, Jakkur Post, Bangalore-560064

er's Reference : EE(Project)/Ynk Zone/WO/97/2020-21

Receipt : 01-04-21

Type : Sunvik

e to BIS codes : IS 1786-2008, IS:1608-2005(RA 2011), IS 1599-2012.

est: : 01-04-21

Identification of sample	Grade of the sample	Diameter of the steel bar	Weight of the sample	Yield stress	Tensile strength	Elongation	Bend test	Rebend test
		(mm)	(kg/m)	(N/mm2)	(N/mm2)	(%)		
Sunvik	Fe500	8	0.391	512	652	20.0%	Satisfactory	Satisfactory
Sunvik	Fe500	10	0.616	528	672	20.0%	Satisfactory	Satisfactory
Sunvik	Fe500	12	0.888	544	668	20.0%	Satisfactory	Satisfactory

sults obtained are satisfactory as per standard requirements.

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TEST REPORT OF PHYSICAL REQUIREMENTS OF BRICKS

Lab ID	:	**CP-2021-12-10-06**
Project Name	:	Construction of Ward Office in Ward No.05, Byatarayanapura **Date: 22-02-21**
Agency	:	Sri. S K Keshavamurthy, #104, Sampigehalli, Jakkur Post, Bangalore-560064
Customer's Reference	:	EE(Project)/Ynk Zone/WO/97/2020-21
Date of Receipt	:	15-02-21
Identification Mark on Brick	:	MTB
Reference to BIS codes	:	IS 1077 : 1992(RA 2011) Common Burnt Clay Building Bricks-Specification IS 3495 (Part 1 to 3) : 1992(RA 2011) Method of Tests Burnt Clay Building Bricks Part 1:Determination of Compressive Strength, (Cl 4.2.3) Part 2:Determination of Water Absorption,(Cl 4.1.3) Part 3: Determination of Efflorescence, (Cl 4)
Date of test	:	15-02-21

COMPRESSIVE STRENGTH

Sl.No.	Length (mm)	Breadth (mm)	Area (mm^2)	Failure Load (KN)	Compressive strength of individual bricks (N/mm^2)	Acceptablity as per IS 1077:1992, Clause 7.1
1	228.13	109.98	25090	206.7	8.2	The bricks shall have a minimum average compressive strength for various classes as given in Table 1 of IS 1077: 1992. The compressive strength of any individual bricks shall not fall below the minimum compressive strength specified for the corresponding class of brick by more than 15%.
2	228.98	108.62	24872	197.6	7.9	
3	231.01	107.99	24947	201.3	8.1	
4	230.11	107.54	24746	199.5	8.1	
5	228.16	106.98	24409	194.6	8.0	
Average of 5 bricks					**8.1**	

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Certificate No.: TC-5548

Lab ID : CP-2021-12-10-06

Date: 22-02-21

WATER ABSORPTION:

Sl.No.	Dry Weight	Wet Weight	Water Absorption(%)	Acceptablity as per IS 1077:1992, Clause 7.2
1	2.975	3.265	9.7	The water Absorption of bricks shall not be more than 20% by weight upto class 12.5 and 15% by weight for higher classes.
2	2.868	3.176	10.7	
3	2.906	3.196	10.0	
4	2.976	3.275	10.0	
5	2.875	3.218	11.9	
Average Water Absorption(%)			10.5	

EFFLORESCENCE:

Sl.No.	Length (mm)	Breadth (mm)	Area (mm^2)	Efflorescence	Acceptablity as per IS 1077:1992, Clause 7.3
1	229.18	108.98	24976	Slight	The efflorescence shall not be more than 'moderate" upto class 12.5 and "slight" for higer classes.
2	228.98	109.18	25000	Moderate	
3	228.18	108.39	24732	Slight	
4	230.19	107.98	24856	Moderate	
5	228.13	109.19	24910	Slight	

DIMENSIONS AND TOLERANCES

Sl.No.	Dimensions obtained for 20 bricks(mm)		Acceptability as per IS 1077:1992, Clause 6.2(b)
1	Length	4610	4520 to 4680 mm
2	Width	2185	2160 to 2240 mm
3	Height	1390	1360 to 1440 mm

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT ON PHYSICAL REQUIREMENTS OF SOLID CONCRETE BLOCKS

p	:	CP-2021-12-10-06	Date: 13-03-21
ct Name	:	Construction of Ward Office in Ward No.05, Byatarayanapura	
ey	:	Sri. S K Keshavamurthy, #104, Sampigehalli, Jakkur Post, Bangalore-560064	
mer's Reference	:	EE(Project)/Ynk Zone/WO/97/2020-21	
of Receipt	:	08-03-21	
ple Type/Size	:	Solid concrete blocks size (400X200X200)mm	
rence to BIS codes	:	IS : 2185 (Part 1) : 2005(RA 2010) Concrete Masonry Specification Part 1:Hollow and Solid Concrete Blocks (Dimensions -Annex-B, Clause 9.2 and 10 , Block density Annex -C Clause 9.3 and10, Compressive strength Annex -D Clause 9.4 and 10, Water absorption Annex -E Clause 9.5 and 10)	
of test	:	08-03-21	

CK DENSITY:

No.	Measurement of overall Dimensions of Individual Blocks			Overall Volume of the Block in Cubic Centimetres	Weight of Oven Dried Block in Kilograms to the nearest 10 Gram	Block Density in Kg/cum*10^5	Avg.Block Density in (Kg/cum)	As per IS 2185(Part 1) :2005 (RA 2010)
	Length	Breadth	Height					
	mm	mm	mm	(Cm^3)	Kg	Kg/m^3	Kg/m^3	
1	399	198	201	15879	31.197	1964.6	1971.4	Not less than 1800Kg/m^3
2	402	200	198	15919	32.303	2029.2		
3	401	202	202	16362	31.424	1920.5		

ATER ABSORPTION:

No.	Wet weight after water absorption	Dry weight (Oven dry)	Water Absorption	Avg.Water Absorption	As per IS 2185(Part 1):2005 (RA 2010)
	kg	kg	%	%	
1	33.91	32.25	4.89	4.25	Shall not be more than 10% by mass
2	33.57	32.14	4.28		
3	33.44	32.24	3.59		

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

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ENSION ANALYSIS

No	Length mm	Breadth mm	Height mm	Requirement as per IS 2185(Part 1):2005
	404	202	203	
	403	202	202	
	402	202	201	
	403	201	202	
5	400	201	203	
6	402	200	203	
7	401	202	199	
8	399	201	202	
9	400	200	200	
10	403	203	201	
11	403	201	201	Length : ± 5mm Breadth : ± 3mm Height : ± 3mm
12	403	201	201	
13	404	199	203	
14	400	203	203	
15	401	200	202	
16	401	203	200	
17	403	201	203	
18	401	201	199	
19	402	201	201	
20	399	200	202	
Average of 20	**402**	**201**	**202**	

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IPRESSIVE STRENGTH: Date: 13-03-21

No.	Size of solid block		Area	Failure Load	Compressive strength	Average Compressive strength
	Length	Breadth				
	mm	mm	(mm^2)	(KN)	N/mm^2	(N/mm^2)
	400	202	80956	415.8	5.1	5.1
2	403	202	81526	417.4	5.1	
3	402	202	81305	413.0	5.1	
4	403	201	80888	415.7	5.1	
5	400	201	80509	420.5	5.2	
6	402	200	80544	417.5	5.2	
7	401	202	80976	414.4	5.1	
8	399	201	80118	414.0	5.2	

per IS Requirements (Table 2, Clause 5.1, 5.2 and 9.4)

Compressive strength		
Grade	Minimum average	Minimum Individual units.
C (5.0)	5.00 N/mm^2	4.00 N/mm^2
C (4.0)	4.00 N/mm^2	3.20 N/mm^2

he Results Obtained are Satisfactory as per Standard Requirements

BBMP, Bangalore

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FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

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Format No: CP/TF/01

TEST REPORT ON PHYSICAL REQUIREMENTS OF SOLID CONCRETE BLOCKS

ID	:	CP-2021-12-10-06 Date: 13-03-21
ject Name	:	Construction of Ward Office in Ward No.05, Byatarayanapura
ncy	:	Sri. S K Keshavamurthy, #104, Sampigehalli, Jakkur Post, Bangalore-560064
tomer's Reference	:	EE(Project)/Ynk Zone/WO/97/2020-21
e of Receipt	:	08-03-21
mple Type/Size	:	Solid concrete blocks size (400X100X200)mm
erence to BIS codes	:	IS : 2185 (Part 1) : 2005(RA 2010) Concrete Masonry Specification Part 1:Hollow and Solid Concrete Blocks (Dimensions -Annex-B, Clause 9.2 and 10 , Block density Annex -C Clause 9.3 and10, Compressive strength Annex -D Clause 9.4 and 10, Water absorption Annex -E Clause 9.5 and 10)
e of test	:	08-03-21

OCK DENSITY:

No.	Measurement of overall Dimensions of Individual Blocks			Overall Volume of the Block in Cubic Centimetres	Weight of Oven Dried Block in Kilograms to the nearest 10 Gram	Block Density in Kg/cum*10^6	Avg.Block Density in (Kg/cum)	As per IS 2185(Part 1) :2005 (RA 2010)
	Length	Breadth	Height					
	mm	mm	mm	(Cm^3)	Kg	Kg/m^3	Kg/m^3	
1	402	100	198	7960	15.337	1926.9	1915.2	Not less than 1800Kg/m^3
2	403	100	202	8141	16.406	2015.3		
3	399	101	202	8140	14.679	1803.3		

ATER ABSORPTION:

l. No.	Wet weight after water absorption	Dry weight (Oven dry)	Water Absorption	Avg.Water Absorption	As per IS 2185(Part 1):2005 (RA 2010)
	kg	kg	%	%	
1	33.91	32.25	4.89	4.25	Shall not be more than 10% by mass
2	33.57	32.14	4.28		
3	33.44	32.24	3.59		

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: CP-2021-12-10-06 Date: 13-03-21

SION ANALYSIS

	Length mm	Breadth mm	Height mm	Requirement as per IS 2185(Part 1):2005
	404	99	202	
	403	99	201	
	404	100	199	
	403	102	200	
	401	103	200	
	403	100	202	
	402	101	203	
	402	101	200	
	402	101	199	
	399	99	200	
	400	101	200	Length : ± 5mm Breadth : ± 3mm Height : ± 3mm
	403	101	202	
3	400	101	200	
4	403	100	203	
5	404	101	199	
6	403	100	203	
7	404	100	201	
8	402	101	199	
19	403	102	202	
20	400	100	199	
erage f 20	**402**	**101**	**201**	

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MPRESSIVE STRENGTH: Date: 13-03-21

No.	Size of solid block		Area	Failure Load	Compressive strength	Average Compressive strength
	Length	Breadth				
	mm	mm	(mm^2)	(KN)	N/mm^2	(N/mm^2)
1	400	99	39666	185.3	4.7	4.6
2	403	99	40012	189.7	4.7	
3	404	100	40560	184.7	4.6	
4	403	102	41118	182.5	4.4	
5	401	103	41342	183.6	4.4	
6	403	100	40318	185.7	4.6	
7	402	101	40621	187.0	4.6	
8	402	101	40551	183.0	4.5	

per IS Requirements (Table 2, Clause 5.1, 5.2 and 9.4)

Compressive strength		
Grade	Minimum average	Minimum Individual units.
C (5.0)	5.00 N/mm^2	4.00 N/mm^2
C (4.0)	4.00 N/mm^2	3.20 N/mm^2

The Results Obtained are Satisfactory as per Standard Requirements

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP

CIVIL Pro Sig Date BANGALORE

FOR CIVIL Pro.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

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Certificate No.: TC-5548

Format No: CP/TF/01

TEST REPORT ON PHYSICAL REQUIREMENTS OF SOLID CONCRETE BLOCKS

D	:	CP-2021-12-10-06 Date: 22-05-21
ct Name	:	Construction of Ward Office in Ward No.05, Byatarayanapura
cy	:	Sri. S K Keshavamurthy, #104, Sampigehalli, Jakkur Post, Bangalore-560064
omer's Reference	:	EE(Project)/Ynk Zone/WO/97/2020-21
of Receipt	:	17-05-21
ple Type/Size	:	Solid concrete blocks size (400X200X200)mm
rence to BIS codes	:	IS : 2185 (Part 1) : 2005(RA 2010) Concrete Masonry Specification Part 1:Hollow and Solid Concrete Blocks (Dimensions -Annex-B, Clause 9.2 and 10 , Block density Annex -C Clause 9.3 and10, Compressive strength Annex -D Clause 9.4 and 10, Water absorption Annex -E Clause 9.5 and 10)
of test	:	17-05-21

OCK DENSITY:

No.	Measurement of overall Dimensions of Individual Blocks			Overall Volume of the Block in Cubic Centimetres	Weight of Oven Dried Block in Kilograms to the nearest 10 Gram	Block Density in Kg/cum*10^6	Avg.Block Density in (Kg/cum)	As per IS 2185(Part 1) :2005 (RA 2010)
	Length	Breadth	Height					
	mm	mm	mm	(Cm^3)	Kg	Kg/m^3	Kg/m^3	
1	400	200	202	16160	32.980	2040.8	2032.6	Not less than 1800Kg/m^3
2	405	199	200	16119	32.981	2046.1		
3	402	200	203	16321	32.817	2010.7		

ATER ABSORPTION:

. No.	Wet weight after water absorption	Dry weight (Oven dry)	Water Absorption	Avg.Water Absorption	As per IS 2185(Part 1):2005 (RA 2010)
	kg	kg	%	%	
1	33.91	32.25	4.89	4.25	Shall not be more than 10% by mass
2	33.57	32.14	4.28		
3	33.44	32.24	3.59		

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